Hazards Refresher

Hazard: a source of danger; a possibility of incurring loss or misfortune
Hazard Analysis: analyzing sources of danger
Hazard Mitigation: any action taken to reduce or eliminate the risk to human life and property from hazards.

JLab has a hazard analysis and mitigation process. This Task Hazard Analysis (THA) is defined in chapter 3210. In general, the process is for supervisors **and** employees to complete a THA by:

- Identifying hazards associated with specific tasks or operations
- Assessing the seriousness (risk) of the hazards, i.e. characterize the hazards, and use technical resources (engineers, safety professionals) to assist in characterizing workplace hazards.
- Identifying the severity of undesirable consequences. See Table 1 in Chapter 3210:
    - Serious injury or death?
    - Environmental contamination?
    - Personnel exposure to toxins?
    - Occupationally derived illness?
    - Significant property loss?
    - Minor injuries?
- Determining how likely the undesirable event is? Is it likely to occur in the next two work-weeks (10 days), or in the next work year? See Table 2 in Chapter 3210
- Assigning a Risk Code. The severity and likelihood are combined to assign a numeric code of 1-4. See Table 3 in Chapter 3210.
- Reducing (mitigate) the hazards primarily with engineered methods, and with administrative measures. Make your hazard mitigation should be proportional to, and based on the assessed risk – grade your approach.
- Revaluating the risk code after you put safeguards in place. Try to mitigate hazards so that they are reduced to a risk code of 2 or less.

Avoid any activity that has a risk code of 4 after mitigation. Activities that still have a risk code of 4 after mitigation **require formal written and approved work control documents** in the form of an SOP, OSP, or temporary work permit approved by the Division Safety Officer and may require additional written approval by senior lab management. Note: some Risk Code 4 work is not permitted, e.g. Mode 3 work on Hazard Class 2 and above electrical equipment. An activity that has a risk code of 3 after mitigation **formal written and approved work control documents** in the form of an SOP, OSP, or temporary work permit.

- Determine if you need formal, written work control documents for the task. Even Risk Code 2 work that is first time or new work, involves complicated tasks, or relies mostly on administrative controls should be described in a work control document. The Engineering Department Head has, in the past, required work control documents for Risk Code 2 tasks that involve handling sharp objects or lifting heavy objects

See the back of this page for a short checklist for to assist you in conducting a THA.

Sample Task Hazard Analysis (THA)

Task location

Task Title

Division

Prepared by

Department

Reviewed by (employee)

Supervisor

Approved by

Standard Requirements:
(PPE, TOSPs, SOPs, etc.)

Potential Hazards	Pre-Risk Code	Safe Procedures/Practices/Controls	Post-Risk Code
Hazardous chemicals: MSDS and PPE			
Vacuum, pressure, or explosive hazard			
Inhalation of dusts, mists, fumes,			
Exposure to excessive heat, excessive noise			
Elevated work, or egress issues			
Non-mechanical materials handling; lifting or sharp edges			
Power tools, extension cords, hand tools			
Use of mechanical lift devices: lift tailgate, fork trucks, hoists, or cranes			
Electrical hazards			
Cryogenic hazards			
Radiation hazards			
Lock, tag try			
Permits or specialized training			
Waste disposal or environmental issues			
Other considerations			

When a completed analysis indicates that the estimated risk code for any of the steps of this task is “medium” or higher (RC≥3), then develop a formal written procedure for the task and have it reviewed and approved prior to beginning the work.